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AMENDMENTS

In the claims:

- 1. Cancelled.
- 2. Cancelled.
- 3. (Currently Amended) The A composition comprising of Claim 1,
 - a) at least one fluorinated (meth)acrylate prepared from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule;
 - b) at least one non-fluorinated (meth)acrylate, said at least one nonfluorinated (meth)acrylate being soluble in said fluorinated (meth)acrylate. said non-fluorinated (meth)acrylate having at least two (meth)acrylate groups per molecule; and
 - c) at least one photoinitiator, said photoinitiator being soluble in the fluorinated (meth)acrylate;

wherein said at least one fluorinated (meth)acrylate is prepared from an ethoxylated fluoropolymer having the following formula:

wherein Rf is a fluorinated moiety having a F/H ratio of at least 3:1, m = 1-10, and n = 2-6.

- 4. (Currently Amended) The composition of Claim 1, 3, wherein said at least one fluorinated (meth)acrylate has a number average molecular weight of at least 400.
- 5. (Currently Amended) The composition of Claim ± 3 , wherein said at least one nonfluorinated (meth)acrylate has at least 3 (meth)acrylate groups per molecule.

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- 6. (Currently Amended) The composition of Claim 4 3 wherein the fluorinated (meth)acrylate is prepared from fluorinated hydroxy-containing monomer or polymer and (meth)acryloyl chloride using a hindered tertiary amine, said amine having at least one tertiary or quaternary carbon atom.
- 7. (Currently Amended) The composition of Claim 5-6 wherein the hindered tertiary amine is N,N-diisopropylethylamine.
- (Currently Amended) The composition of Claim 1 3 further comprising additives selected from the group consisting of contrast enhancers, UV stabilizers, antioxidants, surfactants, adhesion promoters, and viscosity thickeners.
- 9. (Currently Amended) A polymer coating formed by exposing the composition of Claim ± 3 to an actinic radiation.
- 10. (Withdrawn) A waveguide device having a light-transmitting structure formed on a substrate by patterning a photosensitive composition comprising at least one fluorinated (meth)acrylate prepared from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule; at least one non-fluorinated (meth)acrylate, said at least one non-fluorinated(meth)acrylate being soluble in said fluorinated (meth)acrylate, said non-fluorinated(meth)acrylate having at least two (meth)acrylate groups per molecule; and at least one photoinitiator, said photoinitiator being soluble in the fluorinated (meth)acrylate 11. (Withdrawn) The waveguide device of Claim 10, wherein the fluorinated (meth)acrylate is prepared from a fluoropolyether diol selected from the group consisting of

 $HOCH_2CF_2O(CF_2CF_2O)_nCF_2CH_2OH$

 $HOCH_2CF_2CF_2O(CF_2CF_2CF_2O)_nCF_2CF_2CH_2OH$

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HOCH₂CF₂CF₂CF₂O(CF₂CF₂CF₂CF₂CF₂CF₂CF₂CH₂OH

 $HOCH_2CF_2O(CF_2CF_2O)_{r,s}(CF_2CF_2CF_2CF_2O)_n(CF_2CF_2O)_mCF_2CH_2OH_2CF_2O)_n(CF_2CF_2O)_$

and

 $\mathrm{HOCH_2CF_2O}(\mathrm{CF_2CF_2O})_m(\mathrm{CF_2CF_2CF_2O})_n\mathrm{CF_2CF_2O}(\mathrm{CF_2CF_2CF_2O})_n(\mathrm{CF_2CF_2O})_m\mathrm{CF_2CH_2OH}$

wherein m and n are integers ranging from 1 to 50.

12. (Withdrawn) The waveguide device of Claim 10, wherein the at least one fluorinated 2 (meth)acrylate of the photosensitive composition is prepared from an ethoxylated fluoropolymer 3 having the following formula:

 $Rf--(O(-CH_2-CH_2-O)_m-H)_n$

wherein Rf is a fluorinated moiety with F/H ratio of at least 3:1, m = 1-10, and n = 2-6. 13. (Withdrawn) The waveguide device of Claim 10, wherein the at least one

fluorinated (meth)acrylate of the photosensitive composition has a number average molecular weight of at least 400.

- 14. (Withdrawn) The waveguide device of Claim 10, wherein the at least one non-fluorinated (meth)acrylate of the photosensitive composition has at least 3 (meth)acrylate groups per molecule.
- 15. (Withdrawn) The waveguide device of Claim 10, wherein the waveguide structure is patterned with actinic radiation.
- 16. (Withdrawn) The waveguide device of Claim 10, wherein the waveguide structure is patterned with reactive ion etching (RIE).

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- 17. (Withdrawn) A thermo-optic device comprising a waveguide structure of Claim 10 and at least one resistive heater.
- 18. (Withdrawn) The waveguide device of Claim 10 wherein said structure containing at least one optical grating element.
- 19. (Withdrawn) The waveguide device of Claim 18 wherein said device comprising at least one resistive heater.
- 20. (Withdrawn) A method for preparing a waveguide device, the method comprising:
- a) forming a first layer of solid composition on a substrate, said first layer having
 a refractive index, n₁;
- b) coating a second layer of a second composition, having at least one

 (meth)acrylate prepared from a fluorinated monomer or polymer having at

 least two hydroxyl groups per molecule, at least one non-fluorinated

 (meth)acrylate which is soluble in said fluorinated (meth)acrylate and has at

 least two (meth)acrylate groups per molecule, and at least one photoinitiator

 soluble in the fluorinated (meth)acrylate on a substrate;
 - patternwise exposing the coating of the second composition to an actinic
 radiation through a photomask having a desired feature to form a latent image
 in a core layer;
 - d) removing the non-exposed parts with an organic solvent to form a waveguide rib having a second refractive index, n₂, wherein n₂ is greater than n₁; and
 - e) forming a third layer of a third composition having a third refractive index, n_3 , wherein n_3 is lower than n_2 .

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21. (Withdrawn) A method of preparing a waveguide device, the method comprising:

- a) coating a layer of a composition of at least one (meth)acrylate prepared from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule, at least one non-fluorinated (meth)acrylate which is soluble in said fluorinated (meth)acrylate and has at least two (meth)acrylate groups per molecule, and at least one photoinitiator soluble in the fluorinated 6 (meth)acrylate on a substrate;
 - exposing the coating to an actinic radiation to form a bottom cladding layer
 having 8 a first refractive index, n_i;
 - c) coating a layer of a second composition of at least one (meth)acrylate prepared 10 from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule, at 11 least one non-fluorinated (meth)acrylate which is soluble in said fluorinated (meth)acrylate and 12 has at least two (meth)acrylate groups per molecule, and at least one photoinitiator soluble in the 13 fluorinated (meth)acrylate on top of the bottom cladding layer;
 - patternwise exposing the coating of the second composition to an actinic
 radiation through a photomask having a desired feature to form a latent image
 in a core layer;
 - e) removing the non-exposed parts with an organic solvent to form a waveguide rib having a second refractive index, n_2 , wherein n_2 is greater than n_1 ; and
 - f) coating a layer of a third composition of at least one (meth)acrylate prepared from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule, at least one non-fluorinated (meth)acrylate which is soluble in said fluorinated (meth)acrylate and has at least two (meth)acrylate groups per molecule, and at least one photoinitiator soluble in the fluorinated (meth)acrylate

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on top of the core layer and the bottom cladding layer and exposing the third layer to an actinic radiation to form a top cladding layer with a third refractive index, n_3 , wherein n_3 is lower than n_2 .

- 22. (Withdrawn) A method for preparing a waveguide device, the method comprising:
 - a) coating a layer of a composition comprising at least one (meth)acrylate prepared from a fluorinated monomer or polymer having at least two hydroxyl groups per molecule, at least one non-fluorinated (meth)acrylate which is soluble in said fluorinated (meth)acrylate and has at least two (meth)acrylate groups per molecule, and at least one photoiniator soluble in the fluorinated (meth)acrylate on a substrate
 - b) exposing the coating to an actinio radiation to form a solid layer; and patternwise etching the solid layer with reactive ion etching (RIE).